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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,117	11/30/2001	James G. Shelnut	50986	4443

7590 03/15/2004

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EXAMINER

VIJAYAKUMAR, KALLAMBELLA M

ART UNIT PAPER NUMBER

1751

DATE MAILED: 03/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/998,117

Applicant(s)

SHELNUT ET AL.

Examiner

Kallambella Vijayakumar

Art Unit

1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-9,11-16,19 and 20 is/are rejected.
- 7) ☒ Claim(s) 2, 10, 17-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Detailed Action

- Acknowledge the claim for domestic priority under 35 USC 119(e) to a provisional application No. 60/250,048 filed November 30, 2000. Claims 1-20 are currently pending with the application.
- The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A (1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the examiner on form PTO-892 has cited the references and/or the applicants have them provided on PTO-1449, they have not been considered.
- The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
- The disclosure is objected to because of the following informalities:

Appropriate correction is required.

The use of the trademarks "Avanel, Witconate, Ralufon, Tetronic, Rodasurf, Ipegal, and Pluronic" has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Rejections - 35 USC § 102

Claim Rejections - 35 USC § 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
-
- Claims 1, 3-9, 11-16, 19-20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sonnenberg et al (US Patent 5,800,739).

Sonnenberg et al disclose conductive dispersions comprising of polymers, carbon/graphite, metal sulfides and stabilizers (Abstract, Col-3, Line-66 to Col-6, Line-31), method of making the dispersion (Col-6, Line-32 to Col-7, 43) and manufacture of printed circuit board (Col-7, Line-43 to Col-9, Line-9). Sonnenberg et al further disclose making of an aqueous colloidal dispersion of para-toluene sulfonic acid doped polypyrrole stabilized by Igepal CO990 starting from pyrrole and sodium persulfate, and making of a printed circuit board by plating of a double sided through hole board (Col-10, Examples: 6 and 7). Sonnenberg et al further teach the metal-sulfide/graphite/polymer dispersions stabilized by many preferred stabilizers such as Avanol, Pluronic, Rhodasurf and incorporation of additives in the formulation which are the same components being used and/or claimed by the applicants; and forming conductive coatings from Graphite-polymer dispersions (Col-11, Examples 10-12, Col-4, Line-36 to Col-5, Line-39), whereby the disclosure by Sonnenberg would meet the limitations of the above referenced instant claims. Doped Polypyrrole would meet the limitation of a polymer in claims 1, 3, 9 and 16. PdS/Carbon/Graphite would meet the limitation of conductive colloidal particles in claims 4 and 11. Para-toluene sulfonic acid would meet the limitation of the dopant in claims 1, 9 and 16. Igepal, Avanol, Pluronic, Rhodasurf and the listed stabilizers would meet the limitation of claims 5-8 and 12-15. Sodium persulfate would meet the limitation of an oxidant in claim 12. All the limitations of the instant claims are met.

The reference is anticipatory.

In the alternative that the disclosure by Sonnenberg et al be insufficient to arrive at the limitations of the instant claims by the applicants, it would have been obvious to one of

ordinary skill in the art at the time of invention to make modifications to the polymer dispersion compositions and/or method of making these compositions of Sonnenberg et al by choosing other polymers/dopants/ surfactants/carbon and vary the preparative parameters for making the dispersions, because Sonnenberg et al teach the benefits of such incorporations and modifications in stabilizing the colloidal dispersions of conductive polymers and their benefits in attaining stability and quality of coating PCB's, and further use the compositions to plate PCB's of various configurations with the expectation of reasonable success in arriving at the limitations of the instant claims by the applicants.

Allowable Subject Matter


- Claims 2, 10, and 17-18 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Prior art of record do not disclose or fairly suggestive of a composition comprising of the specific dopant in the polymer colloidal composition, a method of making such a composition and a method of plating the surface of a substrate using such a formulation meeting the limitations of the instant claims by the applicants.

Conclusion

- The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sonnenberg et al (US Patent 5,667,662), Allardyce (US Patent 5,415,762 and EP 0 731,192), Barry et al (US Patent 5,240,644, EP 0 432,929), Wessling et al (US patent, 5,567,355) and Tatemori et al (JP 2000-256617).
- Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kallambella Vijayakumar whose telephone number is 571-272-1324. The examiner can normally be reached on M-Th, 07.00 - 16.30 hrs, Alt. Fri: 07.00-15.30 hrs.
- If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Yogendra Gupta can be reached on 571-272-1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.
- Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KMV
March 09, 2004.


Mark Kopeck
Primary Examiner